aneurysm. Endovascular repair is associated with better perioperative outcomes in octogenarian and should be the preferred modality of treatment if feasible.

Author Disclosures: A. Coulter: Nothing to disclose; **G. Doros**: Nothing to disclose; **M. Eslami**: Nothing to disclose; **A. Farber**: Nothing to disclose; **D. Rybin**: Nothing to disclose; **T. Tan**: Nothing to disclose; **W. W. Zhang**: Nothing to disclose.

C8b: Poster Session—Aortic Disease (2)

PS26.

Frailty Increases Risk of Mortality After Elective Abdominal Aortic Aneurysm (AAA) Repair Independent of Age and Comorbidity Status

Sung I. Kim[1], Yazan Duwayri[2], Luke P. Brewster[2], Ravi Veeraswamy[2], Atef Salam[3], Thomas Dodson[2], Shipra Arya[2]. [1]Emory University Rollins School of Public Health, Atlanta, Ga; [2]Emory University School of Medicine Division of Vascular Surgery, Atlanta, Ga; [3]Atlanta VA Medical Center, Decatur, Ga

Objectives: Frailty is a syndrome of decreased physiologic reserve that increases vulnerability to adverse health outcomes. We evaluated the effect of frailty on 30-day mortality after elective AAA repair and compared endovascular (EVAR) and open (OAR) repair for patients with similar frailty burden.

Methods: We identified patients undergoing elective AAA repair using the National Surgical Quality Improvement Program (NSQIP) database. Frailty was quantified using the modified frailty index (mFI; Ann Vasc Surg 2013;27,904-8) and categorized into tertiles. Univariate and multivariate regression was performed to assess mortality in EVAR and OAR groups.

Results: Of 18,594 patients undergoing elective AAA repair, 299 (1.6% overall; 1.1% in EVAR and 3.0% in OAR) died ≤30 days of repair. Mortality risk was consistently more than twofold higher for OAR across all mFI subgroups (Fig). In the multivariate analysis, higher mFI correlated to higher mortality risk (EVAR: odds ratio [OR], 1.7; 95% confidence interval [CI], 1.0-2.9; OAR: OR, 3.3; 95% CI, 1.9-5.6). Contrastingly, age had minimal effect on mortality [EVAR: OR, 1.1; 95% CI, 1.04-1.10; OAR: OR, 1.1; 95% CI, 1.06-1.13). American Society of Anesthesiologists class, recent weight loss, and transfer status were independent risk factors in the EVAR but not in the OAR group.

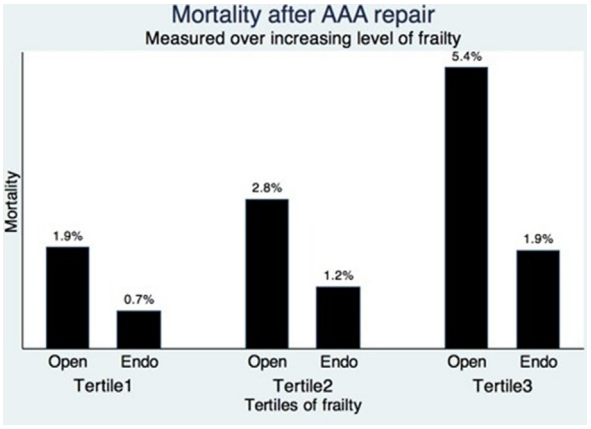

Fig. Thirty-day mortality rate after AAA repair by ascending tertiles of frailty (mFI).

Conclusions: Frailty (mFI) is a stronger predictor of mortality after elective aneurysm repair than existing clinical criteria for both EVAR and OAR. For patients with similar frailty indices, mortality risk was higher with OAR.

Author Disclosures: S. Arya: Nothing to disclose; **L. P. Brewster**: Nothing to disclose; **T. Dodson**: Nothing to disclose; **Y. Duwayri**: Nothing to disclose; **S. I. Kim**: Nothing to disclose; **A. Salam**: Nothing to disclose; **R. Veeraswamy**: Nothing to disclose.

PS28

Isolated Infrarenal Aortic Dissection and Penetrating Aortic Ulcer: A Nonmorbid Condition

David A. Nation, Yana Etkin, Harold I. Litt, Grace J. Wang, Benjamin M. Jackson, Ronald M. Fairman, Edward Y. Woo. University of Pennsylvania, Philadelphia, Pa

Objectives: Isolated infrarenal aortic dissection is uncommon. The natural history and optimal management are unclear. We hypothesize that many of these dissections can be managed expectantly.

Methods: The radiology database at a single institution was queried to identify all imaging between July 2003 and August 2013 that included aortic dissections. A retrospective record review identified baseline patient characteristics, anatomic characteristics of the dissections, symptoms, management, and outcomes.

Results: Twenty-nine infrarenal dissections were identified. Most started below the inferior mesenteric artery (18 of 29) and extended to either the iliac bifurcation (13 of 29) or only into the common iliac arteries (10 of 29). Average dissection length was 77 ± 65 mm (range, 15-204 mm). Many of these dissections had a component of penetrating aortic ulcer. Only 21% (six of 29) of patients presented with symptoms (abdominal or back pain). Eighty-three percent (24 of 29) were managed with observation alone, including all six symptomatic patients. Five patients were treated with EVAR, all on an elective basis. Indications for intervention were concomitant aneurysm (four) and claudication (one). Technical success was 100%. Average follow-up was 26 ± 37 months (range, 0-138 months). Factors that were associated with isolated infrarenal aortic dissection included hypertension (20 of 29), male gender (19 of 29), significant aortic ulcerated plaque (15 of 29), and smoking history (12 of 29). Family history (three of 29) and Marfan disease (two of 29) were less common. Forty-five percent (13 of 29) of patients had other evidence of aortic pathology, with nearly one-third found to have an abdominal aortic aneurysm at some point during the follow-up period.

Conclusions: Isolated infrarenal aortic dissections can be treated successfully with observation even in symptomatic patients. When treatment is required, it is generally for an associated abdominal aortic aneurysm and can often be managed successfully electively using endovascular techniques. Many of these dissections are likely part of the spectrum of evolution of penetrating aortic ulcer.